Qiji Mo

Tianjin, China
Mobile: +86 15713729394
Email: moqj@nbjl.nankai.edu.cn
GitHub: github.com/mqqqqj

Personal Profile

I am currently a second-year PhD student in the College of Computer Science at Nankai University, working in the area of **Systems for AI**. My research focuses on high-dimensional vector search, retrieval-augmented generation (RAG), and memory systems for large language model agents.

Academic Publications

Overcoming the Sync-Compute Dilemma in Parallel Graph-Based Vector Retrieval
IEEE International Conference on Data Engineering (ICDE), 2026
Qiji Mo, Zhiyuan Hua, Zebin Yao, Lixiao Cui, et al.
We propose a decoupled search paradigm for parallel approximate nearest neighbor search that eliminates synchronization overhead. Building on this paradigm, we further introduce a progress-based dynamic pruning strategy that significantly reduces computation.
[Code] | [Paper] (to appear)

Dynamically Detect and Fix Hardness for Efficient Approximate Nearest Neighbor Search
ACM Conference on Management of Data (SIGMOD), 2026
Zhiyuan Hua, **Qiji Mo**, Zebin Yao, Lixiao Cui, et al.
We propose a novel method for improving approximate nearest neighbor search performance in out-of-distribution scenarios by introducing Escape Hardness to dynamically identify and fix defective graph regions.
[Code] | [Paper]

Projects

Intelligent Meeting Minutes System Oct. 2025 – Jan. 2026
Tianjin Capital Environmental Protection Group
Developed a high-performance offline meeting minutes system using Dify and int8-quantized Qwen3-14B. Designed prompt engineering for style-transferable generation and integrated speech-to-text modules for a fully localized workflow.

Intelligent Data Query System Jul. 2025 – Sept. 2025
Tianjin Capital Environmental Protection Group
Optimized Text2SQL and unstructured query pipelines by restructuring reports into four-tuple data using Python. Achieved 92% answer accuracy and 100% recall via hybrid retrieval, and implemented a Vanna-based offline Text2SQL solution with 88% accuracy.

Awards

- 2nd-Class GongNeng Scholarship, Nankai University (2024, 2025)
- Huabei Scholarship, Nankai University (2025)
- Academic Excellence Scholarship, Nankai University (2023)

Education

- PhD in Computer Science, Nankai University 2024 – Present
- B.S. in Computer Science, Nankai University 2020 – 2024
  GPA: 3.69 / 4.00

Skills

Programming: C/C++ (High Performance), Python
Systems/Tools: Linux, Faiss, vLLM, Dify
Languages: English (Fluent), Chinese (Native)